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EXAMINER	
LIN, JASON K	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/773,298	KANG ET AL.	
	Examiner	Art Unit	
	JASON K. LIN	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to application No. 10/773,298 filed on 04/03/2008. **Claims 1-7 and 9-20** are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7 and 9-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. **Claims 1-4, 6, 7, 10, 12, 14, 16, 17, 19, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Solle et al (US 6,757,732), in view of ISO/IEC 13818-6 (First edition 1998-09-01), and further in view of Goffin, II (US 6,918,135).

Consider **claim 1**, Solle teaches a method for controlling network digital service, comprising steps of:

directly requesting, at a client, without passing through a network session resource manager, a digital server for a session connection, and establishing a session by receiving, without passing through said network session resource manager, a confirmation message for the session connection from the digital server (Fig.1, 12; Col 5: lines 26-32, 39-41

teaches that SIP systems can be either SIP clients or SIP servers, and direct session communications between SIP systems. Col 9: line 49 – Col 10: line 15 teaches establishing a session between SIP systems where an invite message {request from client} is sent and an Ok {confirmation} is received from the server. *These communications are direct from client to server as taught by Col 5: lines 39-41 and shown on Fig.12, without passing a session resource manager*); and

Solle does not explicitly teach a digital broadcasting server and service;

directly requesting at the client, without passing through said network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving, without passing through said network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server,

wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the message for requesting the channel change is a ProgramSelectRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a STB (Set Top Box) status field, a broadcast ProgramId field, a Client ID field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server.

In an analogous art ISO/IEC 13818-6 teaches, a digital broadcasting server and service (P.492-495 teaches a SDB-Server);

directly requesting, at the client, without passing through said network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving , without passing through said network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program),

wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), the message for requesting the channel change is a ProgramSelectRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType,

messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), a Session ID (Identification) field, a broadcast ProgramId field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server (Table 10-5, P.293 Section 10.2.3.1).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Solle's system to include a digital broadcasting server and service; directly requesting at the client, without passing through said network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving, without passing through said network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server; wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the message for requesting the channel change is a ProgramSelectRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a broadcast ProgramId field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server, as taught by ISO/IEC 13818-6, for the

advantage of allowing for a more flexible and versatile system, in order to be easily used in a digital broadcasting environment, allowing the client to switch channels with ease, providing the server with all the necessary information allowing the server to react swiftly and accordingly to client demands.

Solle and ISO/IEC 13818-6 do not explicitly teach the message includes a STB (Set Top Box) status field, and a Client ID field.

In an analogous art Goffin teaches, a channel request message includes a STB (Set Top Box) status field, and a Client ID field (Col 3: lines 49-61, Col 4: lines 49-51 teaches transmission of video from a headend and a data router 202 that facilitates headend communications with the client device. Col 5: lines 34-44 and Col 6: lines 14-24 teaches that the data router 202, receives both the STB status and client ID from the client device).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle and ISO/IEC 13818-6 to include a STB (Set Top Box) status field, and a Client ID field with the channel change request message, as taught by Goffin, for the advantage of notifying the server of the state and requests of the STB, and also allowing the server to easily and readily determine the source of the message.

Consider **claim 17**, Solle teaches a system controlling a network digital service comprises:

a client and a digital server, the client directly requesting, without passing through a network session resource manager, the digital server for a session connection, and establishing a session by receiving, without passing through said network session resource manager, a confirmation message for the session connection from the digital server (Fig.1, 12; Col 5: lines 26-32, 39-41 teaches that SIP systems can be either SIP clients or SIP servers, and direct session communications between SIP systems. Col 9: line 49 – Col 10: line 15 teaches establishing a session between SIP systems where an invite message {request from client} is sent and an Ok {confirmation} is received from the server. *These communications are direct from client to server as taught by Col 5: lines 39-41 and shown on Fig.12, without passing a session resource manager*); and

Solle does not explicitly teach a digital broadcasting server and service;

the client directly requesting, without passing through said network session resource manager, a program change from the digital server and receiving a confirmation message, without passing through said network session resource manager, from the digital server, when the digital broadcasting server confirms the program change.

wherein a message for requesting the program change and the confirmation message confirming the program change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the message for requesting the channel change is a

ProgramSelectRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a STB (Set Top Box) status field, a broadcast ProgramId field, a Client ID field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server.

In an analogous art ISO/IEC 13818-6 teaches, a digital broadcasting server and service (P.492-495 teaches a SDB-Server);

the client directly requesting, without passing through said network session resource manager, a program change from the digital server and receiving a confirmation message, without passing through said network session resource manager, from the digital server, when the digital broadcasting server confirms the program change (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program),

wherein a message for requesting the program change and the confirmation message confirming the program change each include a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7,

which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), the message for requesting the channel change is a ProgramSelectRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), a Session ID (Identification) field, a broadcast ProgramId field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server (Table 10-5, P.293 Section 10.2.3.1).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Solle's system to include a digital broadcasting server and service; the client directly requesting, without passing through said network session resource manager, a program change from the digital server and receiving a confirmation message, without passing through said network session resource manager, from the digital server, when the digital broadcasting server confirms the program change; wherein a message for requesting the program change and the confirmation message confirming the program change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the message for requesting the channel change is a ProgramSelectRequest

message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a broadcast ProgramId field, and the ProgramSelectRequest message is transmitted from the client to the digital broadcasting server, as taught by ISO/IEC 13818-6, for the advantage of allowing for a more flexible and versatile system, in order to be easily used in a digital broadcasting environment, allowing the client to switch channels with ease, providing the server with all the necessary information allowing the server to react swiftly and accordingly to client demands.

Solle and ISO/IEC 13818-6 do not explicitly teach the message includes a STB (Set Top Box) status field, and a Client ID field.

In an analogous art Goffin teaches, a channel request message includes a STB (Set Top Box) status field, and a Client ID field (Col 3: lines 49-61, Col 4: lines 49-51 teaches transmission of video from a headend and a data router 202 that facilitates headend communications with the client device. Col 5: lines 34-44 and Col 6: lines 14-24 teaches that the data router 202, receives both the STB status and client ID from the client device).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle and ISO/IEC 13818-6 to include a STB (Set Top Box) status field, and a Client ID field with the channel change request message, as taught by Goffin, for the advantage of

notifying the server of the state and requests of the STB, and also allowing the server to easily and readily determine the source of the message.

Consider **claim 2,** Solle, ISO/IEC 13818-6, and Goffin teach a client receiving messages from a digital broadcasting server, and the client directly delivering messages to the digital broadcasting server (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches receiving at a client a message for checking a status of the client, and delivering a confirmation message for checking the status of the client (P.90-91 teaches that the client can receive a ClientStatusIndication message which requests information. The client in turn sends back a ClientStatusResponse containing the information that was requested. Referring back to Table 4-16 on P.56, many different statusType fields can be used for specifying what type of status is requested including the status of the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include receiving at a client a message for checking a status of the client, and delivering a confirmation message for checking the status of the client, as further taught by ISO/IEC 13818-6, for the advantage of allowing the server to check on the state of the client in order to provision and utilize network resources more efficiently.

Consider **claim 3,** Solle, ISO/IEC 13818-6, and Goffin teach directly terminating a session between client and server (Solle - 624-Fig.12; Col 10: lines 36-38) and a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches, requesting, at the client for a session termination and terminating a session by receiving a confirmation message for the session termination (P. 81-82 teaches a client initiating a release request. Step 1 teaches the client sending a ClientSessionReleaseRequest message for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message terminating the session).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include requesting, at the client for a session termination and terminating a session by receiving a confirmation message for the session termination, as further taught by ISO/IEC 13818-6, for the advantage of allowing the client to end connection with the server in a clean and efficient manner, allowing both parties to disconnect cleanly in a timely manner, allowing resources to be freed back into the network.

Consider **claim 4,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches, requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The ClientSessionReleaseResponse is received from the client and releases all the resources assigned to the session and terminates the session for the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client, as further taught by ISO/IEC 13818-6, for the advantage of allowing the server to end connection with the client in a clean and efficient manner, allowing both parties to disconnect cleanly in a timely manner, allowing resources to be freed back into the network.

Consider **claim 6,** ISO/IEC 13818-6 further wherein a protocol between the client and the digital broadcasting server is a TCP/IP (P. xxv teaches that the transport layer in Fig. 0-3 on P. xxiv may consist of any

protocol including TCP over IP. P. 291 also teaches that Switched Digital Broadcast (SDB) Channel Change Protocol (CCP) can be carried on top of various protocols including IP where their constraints are further defined in clause 9, allowing for the use of TCP over IP).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include wherein a protocol between the client and the digital broadcasting server is a TCP/IP, as further taught by ISO/IEC 13818-6, for the advantage of providing for a more robust and versatile system built upon an industry standard and time tested protocol.

Consider **claim 7,** Solle, ISO/IEC 13818-6, and Goffin teach a message for requesting the session connection is transmitted from the client to the digital broadcasting server (Solle - Fig.1, 12; Col 5: lines 26-32, 39-41 teaches that SIP systems can be either SIP clients or SIP servers, and direct session communications between SIP systems. Col 9: line 49 – Col 10: line 15 teaches establishing a session between SIP systems where an invite message {request from client} is sent and an Ok {confirmation} is received from the server; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches wherein a message for requesting the session connection is a SessionSetupRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header

field, a Session ID (Identification) field, a Reserved field, a Client ID field, and a Server ID field (ISO/IEC 13818-6 - 4.2.4.1 on P. 25-26, and Table 4-8).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include wherein a message for requesting the session connection is a SessionSetupRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a Reserved field, a Client ID field, and a Server ID field, as further taught by ISO/IEC 13818-6, for the advantage of allowing for a more flexible and versatile system, in order to be easily used in a digital broadcasting environment, where the message can easily be sent to the correct server, allowing the server to easily process and execution the session connection for the appropriate client.

Consider **claim 10,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and a wherein a message for requesting a session termination is a ClientReleaseRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a session ID field, a Reason field (ISO/IEC 13818-6 - P.28 Section 4.2.5.1), but do not explicitly teach a ClientID field.

Goffin further teaches a ClientID field (Col 3: lines 49-61, Col 4: lines 49-51 teaches transmission of video from a headend and a data router 202 that facilitates headend communications with the client device. Col 5: lines 34-44 and Col 6: lines 14-24 teaches that the data router 202, receives client ID from the client device).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include a Client ID field, as further taught by Goffin, for the advantage of allowing the server to easily and readily determine the source of the message.

Consider **claim 12,** Solle, ISO/IEC 13818-6, and Goffin teach a confirmation message for confirming the session connection is transmitted from the digital broadcasting server to the client (Solle - Fig.1, 12; Col 5: lines 26-32, 39-41 teaches that SIP systems can be either SIP clients or SIP servers, and direct session communications between SIP systems. Col 9: line 49 – Col 10: line 15 teaches establishing a session between SIP systems where an invite message {request from client} is sent and an Ok {confirmation} is received from the server; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches wherein a confirmation message for confirming the session connection is a SessionSetupConfirm message including: a DSM-CC (Digital Storage Media-Command and Control)

message header field, a Session ID (Identification) field, a response field, and a Server ID field (ISO/IEC 13818-6 - 4.2.4.2 on P 26-27, and Table 4-9).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include wherein a confirmation message for confirming the session connection is a SessionSetupConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, and a Server ID field, as further taught by ISO/IEC 13818-6, for the advantage of for the advantage of allowing for a more flexible and versatile system, in order to be easily used in a digital broadcasting environment, allowing the client to easily process and start the correct session connection between the appropriate server.

Consider **claim 14,** ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and wherein the confirmation message for confirming the status of the client is a ServerStatusConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Response field, a statusType field, a resourceNumber field for showing a number of a resource whose status is wanted to be known, a

resourseStatus field (ISO/IEC 13818-6 - P.38-39 Section 4.2.9.4 ClientStatusResponse {ServerStatusConfirm}; P. 60-61 teaches that resource descriptors may appear in a ClientStatusResponse {ServerStatusConfirm} message. P.56-59 Section 4.7.1 teaches the various fields of a resource descriptor), but do not explicitly teach a ClientID field.

Goffin further teaches a ClientID field (Col 3: lines 49-61, Col 4: lines 49-51 teaches transmission of video from a headend and a data router 202 that facilitates headend communications with the client device. Col 5: lines 34-44 and Col 6: lines 14-24 teaches that the data router 202, receives client ID from the client device).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6, and Goffin to include a Client ID field, as further taught by Goffin, for the advantage of allowing the server to easily and readily determine the source of the message.

Consider **claim 16,** ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and wherein the confirmation message for confirming a session termination is a ServerReleaseConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a session ID field, a response field (ISO/IEC 13818-6 - P.29-30

Section 4.2.5.4 ClientSessionReleaseResponse {ServerReleaseConfirm}), but do not explicitly teach a ClientID field.

Goffin further teaches a ClientID field (Col 3: lines 49-61, Col 4: lines 49-51 teaches transmission of video from a headend and a data router 202 that facilitates headend communications with the client device. Col 5: lines 34-44 and Col 6: lines 14-24 teaches that the data router 202, receives client ID from the client device).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of ISO/IEC 13818-6, and Goffin to include a Client ID field, as further taught by Goffin, for the advantage of allowing the server to easily and readily determine the source of the message.

Consider **claim 19,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches the client requesting for a session termination and terminating a session by receiving a confirmation message for the session termination (P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message for terminating the session).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include the client requesting for a session termination and terminating a session by receiving a confirmation message for the session termination, as further taught by ISO/IEC 13818-6, for the advantage of allowing the client to end connection with the server in a clean and efficient manner, allowing both parties to disconnect cleanly in a timely manner, allowing resources to be freed back into the network.

Consider **claim 20,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly requesting/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. A ClientSessionReleaseResponse is received from the client and releases all the resources assigned to the session terminating the session for the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include requesting the client for a session termination and terminating a

session by receiving a confirmation message for the session termination from the client, as further taught by ISO/IEC 13818-6, for the advantage of for the advantage of allowing the server to end connection with the client in a clean and efficient manner, allowing both parties to disconnect cleanly in a timely manner, allowing resources to be freed back into the network.

5. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Solle et al (US 6,757,732), in view of ISO/IEC 13818-6 (First edition 1998-09-01), in view of Goffin, II (US 6,918,135), and further in view of Chapman (US 7,113,484).

Consider **claim 5,** Solle, ISO/IEC 13818-6, and Goffin teach directly terminating a session between client and server (Solle - 624-Fig.12; Col 10: lines 36-38), and a client and a digital broadcasting server, directly sending/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches, receiving at the client, a session termination request (P. 99 teaches receiving a ClientSessionReleaseIndication for releasing session {session termination}).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include receiving at the client, a session termination request, as taught by ISO/IEC 13818-6, for the advantage of for the advantage of allowing the

server to end connection with the client in a clean and efficient manner, allowing both parties to disconnect cleanly in a timely manner, allowing resources to be freed back into the network.

Solle, ISO/IEC 13818-6, and Goffin do not explicitly teach terminating a session if the client cannot transmit a response to the session termination request.

In an analogous art Chapman teaches terminating a session if the client cannot transmit a response to the session termination request from the digital broadcasting server (Col 11: lines 23-35 teach that if no response is received from the cable modem {client} the resources allocated to the session is de-allocated {terminated}).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include terminating a session {de-allocate resources} when no response is transmitted from the client, as taught in Chapman, for the advantage of freeing up resources for other clients.

6. **Claims 9, 11, and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Solle et al (US 6,757,732), in view of ISO/IEC 13818-6 (First edition 1998-09-01), in view of Goffin, II (US 6,918,135), and further in view of Lalwaney et al. (US 6,289,377).

Consider **claim 9,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly sending/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and wherein the message for checking the status of the client is a ServerStatusRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Reason field, a statusType field, a resourceNumber field for showing a number of a resource whose status is wanted to be known, a Reserved field (ISO/IEC 13818-6 - P.38 Section 4.2.9.2; P. 60-61 teaches that resource descriptors may appear in a ClientStatusIndiction {ServerStatusRequest} message. P.56-59 Section 4.7.1 teaches the various fields of a resource descriptor), but do not explicitly teach a ClientID field.

In an analogous art Lalwaney teaches, a Client ID field (620 - Fig.6; Col 13: lines 16-32 and Col 6: lines 50-53 teaches a packet {message} that is transmitted from the cable operator network to the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include a Client ID field, as taught by Lalwaney, for the advantage of easily identifying the intended destination of the data, helping to ensure that the intended client will receive the data.

Consider **claim 11,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly sending/receiving

messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and wherein a message for requesting a session termination is a ServerReleaseRequest message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a session ID field, a Reason field (ISO/IEC 13818-6 - P.29 Section 4.2.5.3 ClientSessionReleaseIndication {ServerReleaseRequest}), but do not explicitly teach a ClientID field.

In an analogous art Lalwaney teaches, a Client ID field (620 - Fig.6; Col 13: lines 16-32 and Col 6: lines 50-53 teaches a packet {message} that is transmitted from the cable operator network to the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include a Client ID field, as taught by Lalwaney, for the advantage of easily identifying the intended destination of the data, helping to ensure that the intended client will receive the data.

Consider **claim 15,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly sending/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server), and wherein the confirmation message for confirming a session termination is a ClientReleaseConfirm message including: a DSM-CC (Digital Storage Media-Command and Control)

message header field, a session ID field, a response field (ISO/IEC 13818-6 - P.29 Section 4.2.5.2), but do not explicitly teach a ClientID field.

In an analogous art Lalwaney teaches, a Client ID field (620 - Fig.6; Col 13: lines 16-32 and Col 6: lines 50-53 teaches a packet {message} that is transmitted from the cable operator network to the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include a Client ID field, as taught by Lalwaney, for the advantage of easily identifying the intended destination of the data, helping to ensure that the intended client will receive the data.

7. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Solle et al (US 6,757,732), in view of ISO/IEC 13818-6 (First edition 1998-09-01), in view of Lalwaney et al. (US 6,289,377).

Consider **claim 13**, Solle teaches a method for controlling network digital service, comprising steps of:

directly requesting, at a client, without passing through a network session resource manager, a digital server for a session connection, and establishing a session by receiving, without passing through said network session resource manager, a confirmation message for the session connection from the digital server (Fig.1, 12; Col 5: lines 26-32, 39-41 teaches that SIP systems can be either SIP clients or SIP servers, and direct session communications between SIP systems. Col 9: line 49 – Col

10: line 15 teaches establishing a session between SIP systems where an invite message {request from client} is sent and an Ok {confirmation} is received from the server. *These communications are direct from client to server as taught by Col 5: lines 39-41 and shown on Fig.12, without passing a session resource manager*); and

Solle does not explicitly teach a digital broadcasting server and service;

directly requesting at the client, without passing through the network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving, without passing through the network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server,

wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the confirmation message for confirming the channel change is a ProgramSelectConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, a broadcast ProgramId field, and a Client ID field, and the ProgramSelectConfirm message is transmitted from the digital broadcasting server to the client.

In an analogous art ISO/IEC 13818-6 teaches, a digital broadcasting server and service (P.492-495 teaches a SDB-Server);

directly requesting, at the client, without passing through the network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving, without passing through the network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server (P. 492-495 teaches a client directly requesting a broadcast program from the SDB Server. A SDBProgramSelectRequest is generated by the client and sent to the SDB Server for requesting a channel change. A SDBProgramSelectConfirm from the SDB Server is received by the client allowing the client to receive the requested Broadcast Program),

wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in clause 2 on p. 7, which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), the confirmation message for confirming the channel change is a ProgramSelectConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field (P. 492-493; Fig. H-4. protocolDiscriminator, dsmccType, messageId, transcationId, reserved, adaptationLength, messageLength make up a DSM-CC message header field as taught in

clause 2 on p. 7, which are all present in both messages for channel change and confirmation. P.291 Sections 10.1.2-10.2), a Session ID (Identification) field, a response field, a broadcast ProgramId field, and the ProgramSelectConfirm message is transmitted from the digital broadcasting server to the client (Table 10-6, P.293 Section 10.2.3.2),

privateData() field contains connection information necessary for the Client to receive the broadcast program (P.293 Section 10.2.3.2).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Solle's system to include a digital broadcasting server and service; directly requesting at the client, without passing through the network session resource manager, the digital broadcasting server for a channel change, and changing a channel by receiving, without passing through the network session resource manager, a confirmation message for confirming the channel change from the digital broadcasting server, wherein a message for requesting the channel change and the confirmation message for confirming the channel change each include a DSM-CC (Digital Storage Media-Command and Control) message header field, the confirmation message for confirming the channel change is a ProgramSelectConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, a broadcast ProgramId field, and the ProgramSelectConfirm message is transmitted from the digital broadcasting server to the client, as taught by ISO/IEC 13818-6, for the

advantage of allowing for a more flexible and versatile system, in order to be easily used in a digital broadcasting environment, allowing the client to switch channels with ease and control by authorizing the client to change channels, by providing all the necessary confirmation information allowing for a organized system.

Solle and ISO/IEC 13818-6 teaches a ProgramSelectConfirm message (ISO/IEC 13818-6 – P.293 Section 10.2.3.2) that also contains a privateData field that contains connection information necessary for the Client to receive the broadcast program (ISO/IEC 13818-6 – P.293 Section 10.2.3.2), but do not explicitly teach the message includes a Client ID field.

In an analogous art Lalwaney teaches, a Client ID (620 - Fig.6; Col 13: lines 16-32 and Col 6: lines 50-53 teaches a packet {message} that is transmitted from the cable operator network to the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle and ISO/IEC 13818-6 to include a Client ID field, as taught by Lalwaney, for the advantage of easily identifying the intended destination of the data, helping to ensure that the intended client will receive the data.

8. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over Solle et al (US 6,757,732), in view of ISO/IEC 13818-6 (First edition 1998-09-01),

in view of Goffin, II (US 6,918,135), and further in view of Yun (US 2007/0006254).

Consider **claim 18,** Solle, ISO/IEC 13818-6, and Goffin teach a client and a digital broadcasting server, directly sending/receiving messages (Solle - Fig.12; Col 5: lines 39-41; ISO/IEC 13818-6 - P.492-495 teaches a SDB-Server).

ISO/IEC 13818-6 further teaches receiving at a client a message for checking a status of the client, and delivering a client status confirmation message indicative of the status of the client (P.90-91 teaches that the client can receive a ClientStatusIndication message which requests information. The client in turn sends back a ClientStatusResponse containing the information that was requested. Referring back to Table 4-16 on P.56, many different statusType fields can be used for specifying what type of status is requested including the status of the client).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to include receiving at a client a message for checking a status of the client, and delivering a client status confirmation message indicative of the status of the client, as further taught by ISO/IEC 13818-6, for the advantage of allowing the server to check on the state of the client in order to provision and utilize network resources more efficiently.

Solle, ISO/IEC 13818-6, and Goffin do not explicitly teach the client periodically receiving a message from the digital broadcasting server for checking a status of the client.

In an analogous art Yun also teaches the client periodically receiving a message from the digital broadcasting server for checking a status of the client (Paragraph 0090 teaches the cable head end transmitting the command {message} for periodically checking the operation state {status} of the set-top box {client}. The client {POD and set-top box} periodically receives these commands are sent periodically from the server to the client side).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Solle, ISO/IEC 13818-6, and Goffin to have the client periodically receive messages from the digital broadcasting server for checking a status of a client, as taught by Yun, for the advantage of providing the head end {digital broadcasting server} information regarding the set-top box in realtime (Yun - Paragraph 0073) and providing the head end with a more competitive edge (Yun - Paragraph 0035 – 0036).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. LIN whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 9:00AM-6:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian T. Pendleton can be reached on (571)272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Lin

07/05/2008

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